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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/622,247	07/18/2003	Sheldon C. P. Lim	CS01-150	3131

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EXAMINER	
HUYNH, PHUONG	

ART UNIT	PAPER NUMBER
2857	

DATE MAILED: 07/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/622,247	LIM, SHELDON C. P.	
	Examiner	Art Unit	
	Phuong Huynh	2857	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 April 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *7-27* is/are allowed.

6)☒ Claim(s) *1-6* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *07/18/2003*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. This action is responsive to the Amendment filed on April 26, 2006. Previously, claims 7-22 were allowed (see Office Action mailed on January 26, 2006). Currently, no claims have been cancelled.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5 are rejected under 35 U.S.C. 102(b) as being anticipated by Rackoff et al. (hereinafter "Rackoff") (US Patent No. 5574890).

Regarding claim 1, Rackoff discloses a test method comprising:

a) obtaining test measurement values on a device at one or more independent variable values [see Rackoff: col. 10, lines 50-67; and col. 14, lines 21-30];

b) calculating a goodness of fit value for a fitted curve between:

(1) said test measurement values; and

(2) the independent variable values;

[see Rackoff: col. 14, lines 5-20 and lines 31-65]

c) using said goodness of fit value to monitor the processes used to form said device [see col. 14, lines 11-20; and col. 16, lines 15-25].

Regarding claim 2, Rackoff discloses wherein step (c) further includes using control limits on the goodness of fit values [see Rackoff: col. 14, lines 66-col.15, lines 1-21].

Regarding claim 3, Rackoff discloses wherein step (c) further includes using control limits on the goodness of fit values; said control limits established based on a history of goodness of fit values or on device requirements [see Rackoff: Abstract; and col. 14, lines 66-col.15, lines 1-9].

Regarding claim 4, Rackoff discloses the goodness of fit value is a correlation coefficient or a standard error measurement [see Rackoff: col. 14, lines 11-20].

Regarding claim 5, Rackoff discloses the fitted curve is a least squares fitted straight lines [see Rackoff: col. 14, lines 11-20].

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rackoff et al. (hereinafter "Rackoff") (US Patent No. 5574890) in view of Chang et al. (hereinafter "Chang") (US Patent 6,403,389).

Regarding claim 6, Rackoff does not disclose the test measurement values are resistance or capacitance measurement values.

Chang teaches the test measurement values are resistance or capacitance measurement values [see Chang: Abstract; col. 1, lines 16-20; and col. 4, lines 25-43].

It would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to modify the invention of Rackoff to include the test measurement values, as taught by Chang, to increase accurate electrical measurement of the conductor layer's sheet resistivity for use in an integrated circuit design to ensure manufacturability and performance [see Chang: Abstract; col. 1, lines 16-20; and col. 4, lines 25-43].

Allowable Subject Matter

4. Claims 23-27 are allowed.

5. The following is an examiner's statement of reasons for allowance:

Rackoff discloses a computer design tool for determining a predictive indication of slit width variation to adjust an arbor setup in rotary slitting of metal in accordance with the indication of slit width variation. Specifically, models are developed using data fitting methods such as regression models (for example, a linear regression or a least squares method) upon collection and storage of sufficient data in a list to provide a statistically satisfactory correlation factor, "goodness of fit" between such a model and the actual data. Further, Rackoff disclose one or more n-dimensional models are stored in a list and created wherein n is the independent system variables represented in a model, and thereby are produced to which reference can be made to estimate slit width variations to be experience in future slitting runs [see Chang: Abstract; and col. 14, lines 5-29].

Chang discloses that a family of test structures is provided to determine the effective sheet resistivity of a conductor as a function of its width. Specifically, given a measured resistance of a test structure, the interconnection process parameter can be obtained by successive approximation, which is fed into a field solver until the field solver predicts, within predetermined tolerance limits.

Regarding claim 23, the prior art of record does not disclose the following claim limitations:

"calculating a goodness of fit value for a fitted curve for a fitted curve between the test parameter values and a dimensional measurement of the test structures" (emphasis added).

Claim 24 is also allowed as being dependent upon claim 23.

Regarding claim 25, the prior art of record does not disclose the following claim limitations:

"calculating a goodness of fit value for a fitted curve between a first test measurement performed under a first test condition and a second test measurement performed under a second test measurement performed under a second test condition" (emphasis added).

Claims 26-27 are also allowed as being dependent upon claim 25.

Response to Arguments

6. Applicant's arguments, see Remarks, filed April 26, 2006, with respect to claims 1-6, and 23-27 have been fully considered and are persuasive. The rejections of claims 1-6 and 23-26, and the objection of claim 27 have been withdrawn.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phuong Huynh whose telephone number is 571-272-2718. The examiner can normally be reached on M-F: 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc Hoff can be reached on 571-272-2216. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Phuong Huynh
Examiner
Art Unit 2857

PH
07/06/2006

MARC S. HOFF
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TECHNOLOGY CENTER 2800